



WEST NILE VIRUS (WNV)

INFORMATION AND GUIDANCE FOR CLINICIANS

West Nile Virus: Surveillance Information and Guidance for Clinicians

Surveillance Maps and Data

See "WNV Statistics, Surveillance, and Control" (www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm) for maps and data from 2004 and from previous years.

Case Definition

NOTE: This definition is for public health surveillance purposes only. It is not intended for use in clinical diagnosis (see www.cdc.gov/ncidod/dvbid/westnile/clinicians/clindesc.htm).

Clinical Description

- Arboviral infections may be asymptomatic or may result in illnesses of variable severity sometimes associated with central nervous system (CNS) involvement. When the CNS is affected, clinical syndromes ranging from febrile headache to aseptic meningitis to encephalitis may occur, and these are usually indistinguishable from similar syndromes caused by other viruses. Arboviral meningitis is characterized by fever, headache, stiff neck, and pleocytosis. Arboviral encephalitis is characterized by fever, headache, and altered mental status ranging from confusion to coma with or without additional signs of brain dysfunction (e.g., paresis or paralysis, cranial nerve palsies, sensory deficits, abnormal reflexes, generalized convulsions, and abnormal movements).

See also "WNV Clinical Description" (www.cdc.gov/ncidod/dvbid/westnile/clinicians/clindesc.htm).

Laboratory Criteria for Diagnosis

- Fourfold or greater change in virus-specific serum antibody titer, or
- Isolation of virus from or demonstration of specific viral antigen or genomic sequences in tissue, blood, cerebrospinal fluid (CSF), or other body fluid, or
- Virus-specific immunoglobulin M (IgM) antibodies demonstrated in CSF by antibody-capture enzyme immunoassay (EIA), or
- Virus-specific IgM antibodies demonstrated in serum by antibody-capture EIA and confirmed by demonstration of virus-specific serum immunoglobulin G (IgG) antibodies in the same or a later specimen by another serologic assay (e.g., neutralization or hemagglutination inhibition).

See also "Laboratory Diagnosis" (Section 2 from "Epidemic/Epizootic West Nile Virus in the United States: Guidelines for Surveillance, Prevention, and Control"):

www.cdc.gov/ncidod/dvbid/westnile/resources/wnv-guidelines-aug-2003.pdf.

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Case Classification

- *Probable:* An encephalitis or meningitis case occurring during a period when arboviral transmission is likely and with the following supportive serology: 1) a single or stable (less than or equal to twofold change) but elevated titer of virus-specific serum antibodies; or 2) serum IgM antibodies detected by antibody-capture EIA but with no available results of a confirmatory test for virus-specific serum IgG antibodies in the same or a later specimen.
- *Confirmed:* An encephalitis or meningitis case that is laboratory confirmed.

Comment

- Because closely related arboviruses exhibit serologic cross-reactivity, positive results of serologic tests using antigens from a single arbovirus can be misleading. In some circumstances (e.g., in areas where two or more closely related arboviruses occur, or in imported arboviral disease cases), it may be epidemiologically important to attempt to pinpoint the infecting virus by conducting cross-neutralization tests using an appropriate battery of closely related viruses. This is essential, for example, in determining that antibodies detected against St. Louis encephalitis virus are not the result of an infection with West Nile (or dengue) virus, or vice versa, in areas where both of these viruses occur.
- The seasonality of arboviral transmission is variable and depends on the geographic location of exposure, the specific cycles of viral transmission, and local climatic conditions.

Related Links

- Reporting Information & Guidance for Clinicians (www.cdc.gov/ncidod/dvbid/westnile/clinicians/reporting.htm)
- "Surveillance" (Section 1 from "Epidemic/Epizootic West Nile Virus in the United States: Guidelines for Surveillance, Prevention, and Control"): www.cdc.gov/ncidod/dvbid/westnile/resources/wnv-guidelines-aug-2003.pdf
- "Laboratory Diagnosis" (Section 2 from "Epidemic/Epizootic West Nile Virus in the United States: Guidelines for Surveillance, Prevention, and Control"): www.cdc.gov/ncidod/dvbid/westnile/resources/wnv-guidelines-aug-2003.pdf

For more information, visit www.cdc.gov/westnile, or call the CDC public response hotline at (888) 246-2675 (English), (888) 246-2857 (español), or (866) 874-2646 (TTY).

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